

Ruby Classes

You will learn how classes are implemented in the Ruby language and how they are different.

What will we cover?

- Open classes
- Duck Typed
- Just a runnable code
- Object themselves*
- Modules with hierarchies
- Scopes
- Object model
- Etc.

Insight 2:

Open Classes

You can open up any class, even standard classes, and modify them.

Open Classes

```
class String
  def foo
    "bar"
  end
end
```

```
"Some string".foo          # "bar"
```

```
class Array
  def reverse
    raise "Can't reverse arrays!"
  end
end
```

```
["one", "two"].reverse     # RuntimeError: Can't reverse arrays!
```

Insight 3:

DuckTyped

Unlike Java or C++, Ruby is a DuckTyped language. It does not care for class' type, as far as it responds to needed method calls.

DuckTyped

```
def reverse_day(array)
  array.reverse
end
```

```
reverse_day( [1, 2, 3] )
reverse_day( "hello" )
reverse_day( 12345 )
```

```
# [3, 2, 1]
# "olleh"
# NoMethodError: undefined method
#               `reverse' for 1:Fixnum
```

Insight 4:

Just a runnable code

Ruby class definitions are just a runnable code. It means that you can have logical expressions, other class declarations or method calls within your class declaration code.

Just a runnable code

```
// Class definition in Java
class MyClass {
    private String myProperty;

    public String myMethod(){
        return myProperty;
    }
}
```


Runnable code

```
# file my_class.rb
$SPECIAL_CASE = false

class MyClass
  puts "Running code in a class"

  2.times { puts "What?" }

  def special_method
    # do something special
  end if $SPECIAL_CASE
end
```

```
> ruby my_class.rb
Running code in a class
What?
What?
```

```
> MyClass.new.special_method
> NoMethodError: undefined method `special_met
```

Runnable code

```
class MyClass
  class InnerClass
    def meh
      "MyClass::InnerClass#meh"
    end
  end

  def some_method
    "MyClass#some_method"
  end
end
```

MyClass.new

MyClass::InnerClass.new

InnerClass.new

#<MyClass:0x007fb2fb94f218>

#<MyClass::InnerClass:0x007fb2fb955b18>

NameError: uninitialized constant InnerClass

Our progress so far:

- ~~Open classes~~
- ~~Duck Typed~~
- ~~Just a runnable code~~
- Object themselves*
- Modules with hierarchies
- Scopes
- Object model
- Etc.